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ABSTRACT

Secondary analysis of self-reported data from 1,819 questionnaires completed by state vocational education staff in 47 states was used to examine the training and experience of current state vocational education staff in five federal policy priority areas: sex equity, disadvantaged persons, handicapped persons, limited English-speaking student populations, and economic development. Seven concepts were used to identity patterns of staff training and hiring practices in the data. Some of the results are as follows: (1) persons responsible for sex equity, disadvantaged persons, and handicapped persons reported a high level of training and experience and were employed mainly at the management level in state agencies; (2) 76 percent of sex equity personnel were hired in the last 4 years; (3) higher percentages of blacks and other minority groups on the state staffs had training and experience in the five priority areas; and (4) successful states had a higher level of effort in vocational education than less successful states, although states that were successful in economic development showed lower efforts in vocational education. The study concluded that the state staffs had high levels of training and experience sufficient to carry out federal policy initiatives, and it raised questions about the proper role of the federal government in directing how states should respond. (KC)

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THE TRAINING AND EXPERIENCE OF STATE STAFF IN VOCATIONAL EDUCATION: IMPLICATIONS FOR THE IMPLEMENTATION OF FEDERAL POLICIES

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FOREWORD

In the prior four years of the National Center contract, many studies of relevance to national policy in vocational education have been conducted. In this, the fifth year of the contract, data from several of these studies are being assembled to contribute to the discussion of selected policy issues. This paper examines the training and experience of state vocational education administrative staff and discusses the impact federal initiatives have on the configuration of training and experience of staff in the state vocational education agencies.

Several people contributed their time and thoughts to the development of this paper. Critiques of a preliminary draft were provided by Richard W. Whinfield, University of Connecticut; William Richardson, Purdue University; and Robert Norton, Jay Smink, and Kay Adams of the National Center staff.

Special appreciation is also extended to staff members in the Evaluation and Policy Division of the National Center: Morgan V. Lewis, Project Director; Jeannette L. Fraser, Program Associate; Mollie N. Orth, Graduate Research Associate; and N.L. McCaslin, Division Associate Director. Additional assistance was provided by Sherri Trayser as word processor; Connie Faddis as editor; and especially by those members of the National Center staff who conducted the original studies upon which this paper draws.

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EXECUTIVE SUMMARY

One major function of state level administrative staff of vocational education is to provide leadership and technical assistance to local personnel in carrying out federal policy. Such support enhances the ability of local vocational education personnel to effectively implement federal policy. A crucial link between the federal government and the schools in which programs and policies are actually implemented is the state administrative staff. The purpose of this paper is to examine the training and experience of current state staff in vocational education in five federal policy priority areas: sex equity, disadvantaged, handicapped, limited English speaking student populations and economic development. The findings in this paper are based on self-reported data from 1,819 completed questionnaires by state vocational education staff in forty-seven states and are the result of a secondary analysis of that data. The initial findings are described in a report completed at the National Center for Research in Vocational Education entitled A Study of State Level Administration of Vocational Education (Ruff 1981).

Seven concepts were developed for the secondary analysis of the data: (1) level of employment, (2) area of responsibility, (3) length of employment, (4) self-reported training and experience, (5) demographic characteristics, (6) state effort, and (7) the identification of successful states in the implementing of programs in the five federal policy priority areas. The concepts were used to identify patterns or trends in staff training and experience and staff hiring practices that may have had implications for the implementation of federal policies in vocational education. Data from other sources on secondary vocational education enrollments and funding were used to supplement the questionnaire data.

The results are organized into three sections: (1) the distribution of training and experience of state staff by various categories including area of responsibility and length of time with the agency; (2) demographic characteristics of staff reporting training and experience in each of the priority areas; and (3) a comparison of successful states in the various priority areas to the remaining states. Successful states were identified using two techniques. Nominations of successful states in three of the priority areas were obtained from National Center staff who have worked extensively in the area of sex equity, economic development, and programs for the handicapped. For programs for disadvantaged and limited English speaking populations, successful states were defined as those states where 65 percent or more of the total funds spent on these priority areas were from state and local funding sources.

Some of the results are as follows:

- Individuals responsible for sex equity, disadvantaged, and handicapped programs reported a high level of training and experience.
- Staff responsible for sex equity, disadvantaged, and handicapped are employed at the mid-management level in the organizational structure of the state agency.
- Seventy-seven percent of sex equity personnel were hired in the last four years.
- A higher percentage of staff members responsible for handicapped programs were hired in the five-year period prior to the passing of the 1976 Amendments (P.L. 94-482) than in the five years since passage.
- When compared to the composition of the state staff as a whole, there were higher percentages of blacks, Hispanics, and other minorities with training and experience in each of the five priority areas. These percentages were greatest for respondents reporting training and experience in programs for disadvantaged and limited English speaking populations and economic development.
- The level of educational attainment is quite high for all staff, with 85 percent reporting having obtained master's degrees or higher.
- Successful states in sex equity activities had a higher level of effort in vocational education than did the fifty states in general.
- Individuals responsible for sex equity in successful states reported a higher level of training and experience than the individuals in the remaining states.
- Staff members responsible for programs for the disadvantaged in states with successful programs reported themselves as having a higher percentage of training and experience than staff members in other states.
- States which were successful in economic development showed lower levels of effort in vocational education.

Several conclusions and corresponding questions are raised by these findings. First, when the federal government gave a clear mandate to the states to acquire new staff, as it did in the area of sex equity, the states appear to have responded.

However, how prescriptive should the federal government be? Is it appropriate for the federal government to direct funding to the states for the specific purpose of hiring staff to address a federal initiative? Or should decisions about the composition of state staff more appropriately be reserved for state decision-makers? Second, in several of the priority areas, there appeared to be a tendency for staff members to reflect the characteristics of the populations being served. Does this have any influence on the quality of the programs? Finally, vocational education plays a support role in economic development activities. Do staffs within vocational education state agencies need to have economic development expertise or is that expertise provided by other state agencies? The data presented in this paper raise rather than answer these questions concerning the appropriate roles of the federal and state government and the related questions concerning the ultimate impact that the quality of state staff has upon the policy process.

What is evident from the data is that state staff were prepared to address federal policy initiatives by virtue of the levels of training and experience reported in all five federal policy priority areas. Further, the demographic characteristics of state staff were varied and did not reflect the stereotype of white males from agriculture backgrounds that is often attributed to vocational education administrators.

INTRODUCTION

Federal vocational education policies are implemented at the state and local levels of government. A primary federal role in vocational education is leadership for program improvement through legislation and related funding. Almost all vocational education is delivered at the local level, and state agencies facilitate this process by providing leadership and technical assistance to local educators. While vocational education can only be as good as the schools in which the programs are delivered, a crucial link between the federal government and the schools is the capabilities of state staff in translating federal policy initiatives into programs and policies for the schools. The purpose of this paper is to examine the capacity of the state staffs of vocational education agencies to carry out federal initiatives.

This paper is based on the assumption that the background and skills of state staff responsible for administering vocational education programs determine to a considerable degree how new initiatives are implemented. The staff of local agencies are often too removed and too involved with day-to-day problems to be responsive to new concerns arising at the national and sometimes state levels. The degree to which local personnel acquire the knowledge and skills needed to deal with new federal priorities is often dependent on how well state staff articulate the initiatives and provide technical assistance relevant to the topic. How well state staff perform these functions is, in part, dependent on their own training and experience.

The 1976 Amendments (P.L. 94-482) to the Vocational Education Act of 1963 addressed several federal priorities, including overcoming sex stereotyping, and providing special services to the disadvantaged, the handicapped, and limited English speaking student populations. Federal dollars were specifically allocated to these priorities. While the federal legislation specified funding, the implementation of programs directed to these priorities rested with the state and local vocational personnel in the fifty states. Were state staffs prepared to provide leadership for the implementation of these policies? Was the mix of training and experience for newly hired staff in these areas different from the previous mixture of training and experience required in state staff personnel? How do states with apparent success in these areas differ from other states in their level of effort in vocational education and in the staffing patterns in the state agency? These are but a few of the questions that come to mind when examining the impact of federal initiatives in influencing the composition of staffs within state departments of vocational education.

The 1980s have brought forth an additional initiative, the push for economic development. Some states have used vocational education as a component of economic development for several years, and it has recently been promoted as a national priority. Had this initiative affected the composition of state staffs as of the fall of 1980? What are the characteristics of the vocational education enterprise in states that are leaders in economic development in terms of funding and enrollments compared to all the other states? How do their staffs differ in training and experience? The data presented in the following pages provide a first look at these issues.

By reviewing information about state staff, it may be possible to determine if staffing patterns or areas of staff expertise have been changing (e.g., new hires for certain positions having different training or experience than the mix in the entire agency). If patterns are identified, they will imply that federal initiatives do affect hiring which results in changing the configuration of professional preparation of staff in the state agencies.

Data Definitions

The data on state staff characteristics and background were taken from a mail survey of state vocational staff, which included state vocational directors and assistant directors, program area supervisors, coordinators, and program and functional specialists. This survey was conducted at the National Center in the fall of 1980 (Ruff 1981). The data consisted of 1,819 completed questionnaires (81 percent response rate) covering personal characteristics and professional preparation and experience from vocational staff in forty-seven participating states. In this data the measurement of the capacity of state staff was based on self-reported training and previous experience. No information was available for validating the accuracy of these self-reports.

The use of an existing data base provides special problems to the researcher. In this case, parallel data on all five priority areas were not available. When asking staff about their primary areas of responsibility in their current jobs, economic development and limited English speaking programs were not included in the questionnaire. In developing the training and experience variable, data were not available on previous training about handicapped populations. For this priority area, data reported on the training and experience variable reflect only work experience.

The seven concepts developed for analyzing the data will be discussed next.

Level of Employment

Respondents were asked to indicate the position classification that best corresponded to their current position. For this analysis these classifications were combined into three levels. Senior level administrators included the chief administrator of vocational education and those administrators one or two levels below the chief administrator. Middle level administrators included the administrative heads of traditional program areas, such as home economics or trade and industrial education, and the administrative heads of suppport service areas such as evaluation managers or research coordination unit directors. The specialist category included individuals who worked in either the traditional program areas or in the support service areas, but who were not the administrative head of that program or service area.

Area of Responsibility

State staff were asked to indicate the specialty area that best described their current position in the state agency. Three of the priority areas under study were included in this listing of areas of responsibility: disadvantaged, handicapped, and sex equity.

Length of Employment

Respondents were asked the number of years they had been employed in a vocational education position in the state agency. New staff were defined as respondents who had been employed four years or less in the state agency. Thus, all staff hired after the 1976 Amendments were classified as new staff in this analysis. Staff hired between 1971 and 1976 (five to nine years of experience) were classified as experienced staff. Career staff had been employed by the state agency for ten years or more.

Self-Reported Training and Experience

Training and experience in a specialty area were combined to generate a single measure of self-reported training and experience. Respondents were asked to report the number of years of major work experience in the five priority areas under study. Respondents reporting at least one year of experience were defined as having work experience. As a measure of training, respondents were asked to rate the degree to which their degree programs, seminars, workshops, and other training programs provided a background in four of the five priority areas (the handicapped populations category was omitted). Respondents reporting either a moderate or extensive background were defined as having training in the specialty area. Work experience and training were combined to generate a four-level measure, ranging from no reported background (neither training nor work experience) to a

strong background (both training and work experience). The analysis was based on the assumption that the quantity of training and experience would provide a surrogate indicator of the preparedness of the staff to address federal priorities.

Demographic Characteristics

Five measures of demographic characteristics were examined: age, sex, ethnic background, highest level of education attainment, and--as a measure of urban/rural background--the size of community where the respondents lived at the age of fourteen.

State Effort

Four indicators of the level of state effort in vocational education were developed: (1) vocational education enrollment as a percent of the total secondary enrollment, (2) state and local funding for vocational education as a percent of all vocational funds, (3) per capita expenditures per all secondary vocational students, and (4) per capita expenditures per students in occupationally specific secondary programs. These were calculated to measure the level of effort in each state in secondary vocational education. The data used for this analysis were acquired from the Vocational Education Data System (VEDS)(National Center for Education Statistics 1982), the Digest of Education Statistics (Grant and Eiden 1981), and Statistics of Public Elementary and Secondary School Systems Fall 1979 (McDowell and Price 1981).

Successful States

States were categorized into two categories: (1) those states that appeared successful in the priority areas, and (2) the remaining states. Two strategies were employed to categorize states. For disadvantaged and limited English speaking priority areas, states where 65 percent or more of the total funds spent on these priority areas were from state and local funding sources were considered successful states. For sex equity, handicapped, and economic development priority areas National Center staff who specialize in these selected priority areas nominated states that, in their judgement, were successful in terms of staffing, funding, extent of activity, and/or evidence of success. The staff who were asked to nominate states had extensive experience and background in these areas and were aware of current state activities.

Related Research

A literature review was conducted to identify research studies relevant to the state administration of vocational education. A computerized search was conducted using Ohio

State University Mechanized Information Center facilities. The data bases reviewed included Resources in Education (RIE) and the Current Index to Journals in Education (CIJE). The ERIC descriptors used varied from very specific (e.g., vocational directors) to more generic terms (e.g., administrative personnel) to identify all related documents.

A substantial number of documents were identified that related to local vocational administrators and their competencies, but very few documents were identified that focused on state level administrators of vocational education. For example, studies of leadership capabilities or personnel development needs were identified in thirteen different states, but these were primarily focused on local vocational administrators.

While the identified documents served a useful purpose in describing the type of research that had been done, the identified research was not related to the research being conducted for this particular paper. Therefore, the data and the findings in this policy paper must stand alone with respect to related literature, with the exception of a previous paper using the same data, A Study of State Level Administration of Vocational Education (Ruff 1981).

RESULTS

The results are organized into three sections. The first section addresses two basic descriptive questions: (1) How is training and experience distributed in each priority area? (2) When was that training and experience acquired in the state agency? The second section provides demographic characteristics of staff reporting both training and experience in each of the priority areas. The final section compares those states defined as successful with the remaining states in each of the five priority areas. Staffing patterns and the level of effort in secondary vocational education are compared for the two types of states.

Distribution of Preparedness

The individuals responsible for sex equity, disadvantaged, and handicapped programs reported a high frequency of training and experience in their areas. Almost nine out of ten (88 percent) of those responsible for programs for the disadvantaged reported they had either training or experience, while almost all sex equity personnel (95 percent) reported one or the other (table 1). Nearly two-fifths (38 percent) of the staffs working in sex equity and with the disadvantaged reported having both training and experience. In all cases, experience alone was a more frequent preparation for the job than training only. The data in table 1 strongly suggest that the personnel responsible for implementation have the prerequisites necessary to address federal initiatives in these areas by virtue of their training or experience.

A majority of staff members responsible for sex equity, disadvantaged, and handicapped programs were employed at the mid-management level of the organizational structure of state governments (table 2). Economic development and limited English speaking training and experience were distributed throughout the state agency.

About one-third (32 percent) of all staff members in the state agency as a whole were hired within the four years following the 1976 Amendments, while 77 percent of sex equity personnel were hired in that period (table 3). This implies that the expertise necessary to be a sex equity coordinator was not available in the existing state staffs, and it was necessary for states to hire externally to fulfill the need generated by the federal initiative in sex equity.

TABLE 1

LEVEL OF TRAINING AND EXPERIENCE BY AREA OF RESPONSIBILITY

Level of Training and Experience	Area of Responsibility		
	Sex Equity (percent)	Disadvantaged (percent)	Handicapped[a] (percent)
Training and Experience	38	42	NA
Training Only	7	2	NA
Experience Only	50	44	91
No Training or Experience	5	12	9
TOTAL	100	100	100
Number	[44]	[52]	[45]

[a]Data are not available on the receipt of training by staff in the area of the handicapped.

TABLE 2

LEVEL OF EMPLOYMENT BY AREA OF RESPONSIBILITY

Level of Employment[a]	All Staff (percent)	Area of Responsibility[b] Sex Equity (percent)	Disadvantaged (percent)	Handicapped (percent)	Staff with Training & Experience Economic Development (percent)	Limited English Speaking (percent)
Senior Level Administrator	9	2	8	9	10	12
Middle Level Administrator	46	82	60	57	45	46
Specialist	45	16	32	34	45	42
TOTAL	100	100	100	100	100	100
Number	[1813]	[44]	[53]	[44]	[525]	[190]

[a]Senior level administrator includes state directors and assistant state directors.

Middle level administrator includes administrative heads of traditional program service areas and heads of support service areas.

Specialist includes individuals who work in traditional program areas and individuals who work in one of the support service areas.

[b]Area of responsibility is defined as the primary area of responsibility of the respondent's present position.

TABLE 3

LENGTH OF EMPLOYMENT BY AREA OF RESPONSIBILITY

Tenure of Staff	All Staff (percent)	Area of Responsibility		
		Sex Equity (percent)	Disadvantaged (percent)	Handicapped (percent)
0-4 Years	32	77	30	29
5-9 Years	26	18	26	33
10 Years or More	42	5	44	38
TOTAL	100	100	100	100
Number	[1808]	[44]	[54]	[45]

State staff members addressing the needs of the handicapped were a little more likely to have been recruited in the five-year period prior to the 1976 Amendments. Thirty-three percent of the handicapped program staff had been employed for five to ten years in the state agency compared to 26 percent of the state staff as a whole (table 3). Data on staff responsible for programs for the disadvantaged show that there had been no particular time period when staff members were recruited at a rate higher than the staff as a whole.

Table 4 presents the level of training and experience that was reported by all state agency staff for each substantive area by length of service in the state agency. For sex equity preparedness, new staff reported a higher level of training and experience, while career staff reported a lower level.

Table 4 also shows that almost one-third of all staff had training and experience in handicapped programs and economic development, while one-fifth had training and experience in sex equity and only one-tenth had backgrounds in limited English speaking and disadvantaged programs. While it can be argued that training and experience is only important for those respondents who have ultimate programmatic responsibility, if a familiarity with the issues is present throughout the state staff as a whole, there could be a natural basis of support within the department for policies relating to the priority area.

Demographic Characteristics of Staff

Table 5 through table 9 present the demographic characteristics of state agency personnel who reported both training and experience in each of the five priority areas. Before discussing the individual tables, some general observations describing the similarities across all five areas are in order.

First, compared to the composition of the state agency staff as a whole, staff reporting training and experience in each of the five priority areas included a higher percentage of blacks, Hispanics, and other minorities (table 7). The percentage of minorities with training and experience varied from 13 to 24 percent for the priority areas, while only 9 percent of the state agency staff as a whole was from a minority group.

The level of educational attainment was quite high for all staff, and 85 percent reported obtaining master's degrees or higher (table 8). The staff members with training and experience in sex equity, economic development, and limited English speaking reported even slightly more advanced degrees.

TABLE 4

LENGTH OF EMPLOYMENT
BY STAFF WITH TRAINING AND EXPERIENCE

Tenure of Staff	Staff with Training and Experience				
	Sex Equity (percent)	Disadvantaged (percent)	Handicapped[a] (percent)	Economic Development (percent)	Limited English Speaking (percent)
0-4 Years	24[b]	11	32	31	11
5-9 Years	16	9	34	28	9
10 or More Years	13	11	30	29	11
All Staff	17[c]	10	32	29	11

[a]Staff with experience in handicapped programs; data on training are not available.

[b]The percentage in this cell is interpreted as follows: 24 percent of new staff members have both training and expertise in sex equity.

[c]This is the percentage of all respondents who have training and experience in each of the substantive areas.

When examining table 9, note that without exception, staff who at age fourteen resided in large cities (population 100,000 or more) were employed at a higher rate in each of the priority areas. That percentage was greatest in the two priority areas that serve the disadvantaged and the limited English speaking populations, which are often concentrated in large cities.

Sex Equity

Compared to the composition of the state agency staff as a whole, staff members with sex equity training and experience were more likely to be women (table 5), were young (table 6), were less likely to be white (table 7), had higher levels of education (table 8), were less likely to have grown up in a rural community, and were more likely to have resided in large cities (table 9).

Disadvantaged

Staff members who reported a background in programs for the disadvantaged, in comparison to state agency personnel as a whole were more likely to be in the forty- to fifty-five-year age range (table 6); were more likely to be black, Hispanic, or to be a member of other minority groups (table 7); were a little more likely to have obtained education above the bachelor's degree (table 8); and were much more likely to be from large cities (table 9).

Handicapped

Staff with training and experience in handicapped issues were slightly more likely to be male (table 5), less likely to be white (table 7), more likely to have a doctorate or educational specialist degree (table 8), and slightly less likely to be from a rural community (table 9) when compared to state agency personnel as a whole.

Economic Development

Staff with training and experience in economic development, when compared to state agency personnel as a whole were more likely to be women (table 5), slightly more likely to be forty to fifty-five years old (table 6), more likely to be black (table 7), more likely to have a master's degree or higher level of education (table 8), and were slightly more likely to have resided in a large city when fourteen years old (table 9).

Limited English Speaking

When compared to all staff, state staff personnel with training and experience in limited English speaking programs were more likely to be forty to fifty-five years old (table 6), were

TABLE 5

SEX BY STAFF WITH TRAINING AND EXPERIENCE

Gender	All Staff (percent)	Staff with Training and Experience: Sex Equity (percent)	Disadvantaged (percent)	Handicapped[a] (percent)	Economic Development (percent)	Limited English Speaking (percent)
Female	28	39	27	26	31	28
Male	72	61	73	74	69	72
TOTAL	100	100	100	100	100	100
Number	[1795]	[312]	[179]	[577]	[523]	[191]

[a]Staff with experience only. Data are not available on the receipt of training by staff in the area of the handicapped.

TABLE 6

AGE BY STAFF WITH TRAINING AND EXPERIENCE

Age	All Staff (percent)	Staff with Training and Experience: Sex Equity (percent)	Disadvantaged (percent)	Handicapped[a] (percent)	Economic Development (percent)	Limited English Speaking (percent)
Under 31	5	6	3	6	4	3
31 to 40 years	32	36	31	31	32	29
40 to 55 years	45	46	51	47	48	55
Over 55	18	12	15	16	16	13
TOTAL	100	100	100	100	100	100
Number	[1803]	[315]	[181]	[579]	[524]	[192]

[a]Staff with experience only. Data are not available on the receipt of training by staff in the area of the handicapped.

TABLE 7

ETHNIC BACKGROUND BY STAFF WITH TRAINING AND EXPERIENCE

Ethnic Background	All Staff (percent)	Staff with Training and Experience				
		Sex Equity (percent)	Disadvantaged (percent)	Handicapped[a] (percent)	Economic Development (percent)	Limited English Speaking (percent)
White	91	87	76	86	83	83
Black	6	10	13	9	12	10
Hispanic	1	2	7	2	2	3
Other	2	1	4	3	3	4
TOTAL	100	100	100	100	100	100
Number	[1799]	[315]	[180]	[577]	[524]	[191]

[a]Staff with experience only. Data are not available on the receipt of training by staff in the area of the handicapped.

TABLE 8

LEVEL OF EDUCATION BY STAFF WITH TRAINING AND EXPERIENCE

Education Level	All Staff (percent)	Staff with Training and Experience: Sex Equity (percent)	Disadvantaged (percent)	Handicapped[a] (percent)	Economic Development (percent)	Limited English Speaking (percent)
Doctorate	14	15	15	17	16	22
Educational Specialist	5	7	4	6	6	7
Master's	66	68	68	61	68	60
Bachelor's	11	9	11	12	9	8
Associate	1	1	0	1	0	1
High School	3	0	2	3	1	2
TOTAL	100	100	100	100	100	100
Number	[1800]	[315]	[179]	[580]	[525]	[192]

[a]Staff with experience only. Data are not available on the receipt of training by staff in the area of the handicapped.

TABLE 9

SIZE OF COMMUNITY WHERE STAFF LIVED AT AGE FOURTEEN BY STAFF WITH TRAINING AND EXPERIENCE

Size of Community	All Staff (percent)	Staff with Training and Experience				
		Sex Equity (percent)	Disadvantaged (percent)	Handicapped[a] (percent)	Economic Development (percent)	Limited English Speaking (percent)
Under 2,500	33	29	27	29	30	30
2,500 to 25,000	32	32	28	33	31	27
25,001 to 100,000	17	18	16	17	18	16
Over 100,000	18	21	29	21	21	27
TOTAL	100	100	100	100	100	100
Number	[1795]	[314]	[180]	[576]	[523]	[191]

[a]Staff with experience only. Data are not available on the receipt of training by staff in the area of the handicapped.

more likely to be Hispanic or from other minority groups (table 7), were much more likely to have a doctoral degree (table 8), and were much more likely to have come from a large city with a population greater than 100,000 (table 9).

Staffing within Successful States

The preceding results indicate a tendency for state staff to have personal characteristics congruent with their responsibilities in the selected priority areas. Almost all staff also reported preparedness for these responsibilities by virtue of their training or experience. In this section an attempt is made to relate state efforts in vocational education and success in these priority areas to patterns of state staffing.

Defining effort and success is, of course, difficult. The approach taken in this paper to define effort consisted of categorizing states into high, medium, and low effort states on the basis of four indicators: (1) enrollment in vocational education as a percentage of total enrollment in grades seven through twelve; (2) state and local funds as a percentage of total vocational funds; (3) per capita expenditures from vocational funds for total secondary vocational enrollment; and (4) per capita expenditure from vocational funds for students in secondary occupationally specific programs.* Success in the priority areas was defined by the reputation the states had for making exemplary efforts in these areas. Nominations of successful states were obtained from staff of the National Center who specialized in the selected priority areas.

The results in tables 10, 12, 14, 16 and 18 are based on percentages of states that were categorized as indicated by the footnotes in those tables. Unlike the other tables in this paper, the figures reflect percent of states, not percent of state staff.

Sex Equity

Sex equity success states were more active in and committed to vocational education than were the states in general (table 10). All four measures of effort presented in Table 10 show a strong tendency for success states to have committed a high

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*Occupationally specific programs at the secondary level are defined in the Vocational Education Data System as "those programs offered at or above grade eleven which purport to impart entry level job skills for a specific gainful occupation." (Golladay and Wulfsberg 1981, p. 16).

TABLE 10

LEVEL OF EFFORT BY SUCCESSFUL STATES IN SEX EQUITY PROGRAMS

Level of Effort	Enrollment Level[a]		State/Local Commitment of Funds[b]		Per Capita Expenditures[c] (Total Vocational Enrollment)		Per Capita Expenditures[d] (Occupationally Specific)	
	All States (percent)	Sex Equity Success States (percent)	All States (percent)	Sex Equity Success States (percent)	All States (percent)	Sex Equity Success States (percent)	All States (percent)	Sex Equity Success States (percent)
High	58	26	28	58	32	42	36	42
Medium	25	38	40	34	36	58	34	42
Low	17	36	32	8	32	0	30	16
TOTAL	100	100	100	100	100	100	100	100
Number	[12]	[50]	[50]	[12]	[50]	[12]	[50]	[12]

[a]Percentage of students in grades 7-12 enrolled in vocational education for school year 1979-80 (Low=10.6-35.9; Medium=36.0-50.9; High=51.0-100.5). Source: Digest of Education Statistics 1981 and VEDS 79-80 Preliminary Table 1104.

[b]State and local funds as a percent of total vocational education funds (Low=61.1-86.0; Medium=86.1-89.9; High=90.0-93.7). Source: VEDS 79-80 Preliminary Table 7.5.

[c]Per capita expenditure per secondary vocational student (Low=$310-549; Medium=$550-799; High=$800-1,850). Source: VEDS 79-80 Preliminary Tables 7.5 and 1104.

[d]Per capita expenditures per occupationally specific secondary vocational students (Low=$450-1,699; Medium=$1,700-2,609; High=$2,610-9,720). Source: VEDS 79-80 Preliminary Tables 7.5 and 1204.

percentage of local funds to vocational education, have had high secondary enrollment levels, and have had high per capita expenditures for vocational education. In successful states, individuals responsible for sex equity reported a generally higher level of training and experience than staff in the remaining states (table 11). The percentage of sex equity staff reporting both training and experience in successful states was 46 percent, compared to 36 percent in the remaining states. While every sex equity staff member in successful states reported some level of training or experience, six percent of the staff in the remaining states reported no preparation for the job.

Disadvantaged

States that exerted effort on programs for the disadvantaged (defined as those states in which the state provided 65 percent or more of all funds under Section 110) had high levels of secondary vocational education enrollment. These states were more likely to provide 86 to 90 percent of total vocational funds from state and local funds, and--when measured by occupationally specific enrollment levels--had a high per capita expenditure for vocational education (table 12).

The data in table 13 show that in programs for disadvantaged populations, all states had about 12 percent of staff with no reported training or experience. The successful states, however, were more likely to have staff with both training and experience than the remaining states. The remaining states were more likely to have staff with experience only. Staffs with responsibility for programs for the disadvantaged reported a higher level of training and experience in states defined as successful, which implies different hiring practices in the two categories of states.

Handicapped

Given that only five states were categorized as successful in programs for the handicapped, it is difficult to make any statements about the efforts of the states in vocational education. The data suggest, however, that the successful states tended to commit more state and local funds to all secondary vocational education, and that successful states were not states with low enrollment levels (table 14). Staff in the five nominated states reported a higher level of experience than did staffs in the remaining states (table 15).

Economic Development

Active states in economic development tended to show lower levels of effort in vocational education (table 16). States that emphasized economic development may not have been financially

TABLE 11

LEVEL OF TRAINING AND EXPERIENCE OF INDIVIDUALS RESPONSIBLE FOR SEX EQUITY BY SUCCESSFULNESS OF STATES

Level of Training and Experience	All Staff (percent)	Sex Equity Personnel	
		Success States (percent)	Remaining States (percent)
Training and Experience	38	46	36
Training Only	7	8	6
Experience Only	50	46	52
No Training or Experience	5	0	6
Total	100	100	100
Number	[44]	[13]	[31]

TABLE 12

LEVEL OF EFFORT BY SUCCESSFUL STATES IN DISADVANTAGED PROGRAMS (SECTION 110 FUNDS)

Level of Effort	Enrollment Level[a]		State/Local Commitment of Funds[b]		Per Capita Expenditures[c] (Total Vocational Enrollment)		Per Capita Expenditures[d] (Occupationally Specific)	
	All States (percent)	Success States (percent)	All States (percent)	Success States (percent)	All States (percent)	Success States (percent)	All States (percent)	Success States (percent)
High	28	44	26	33	32	28	36	50
Medium	40	39	38	56	36	44	34	28
Low	32	17	36	11	32	28	30	25
TOTAL	100	100	100	100	100	100	100	100
Number	[50]	[18]	[50]	[18]	[50]	[18]	[50]	[18]

[a]Percentage of students in grades 7-12 enrolled in vocational education for school year 1979-80 (Low=10.6-35.9; Medium=36.0-50.9; High=51.0-100.5). Source: Digest of Education Statistics 1981 and VEDS 79-80 Preliminary Table 1104.

[b]State and local funds as a percent of total vocational education funds (Low=61.1-86.0; Medium=86.1-89.9; High=90.0-93.7). Source: VEDS 79-80 Preliminary Table 7.5.

[c]Per capita expenditure per secondary vocational student (Low=$310-549; Medium=$550-799; High=$800-1,850). Source: VEDS 79-80 Preliminary Tables 7.5 and 1104.

[d]Per capita expenditures per occupationally specific secondary vocational students (Low=$450-1,699; Medium=$1,700-2,609; High=$2,610-9,720). Source: VEDS 79-80 Preliminary Tables 7.5 and 1204.

[e]Successful States are those states (n=18) in which the state provided 65 percent or more of all funds under Section 110 for disadvantaged populations. Successful states were Arkansas, California, Connecticut, Florida, Hawaii, Illinois, Louisianna, Maine, Maryland, Nevada, New York, Ohio, Oklahoma, Rhode Island, Texas, Utah, Washington and Wisconsin.

TABLE 13

LEVEL OF TRAINING AND EXPERIENCE OF INDIVIDUALS RESPONSIBLE FOR DISADVANTAGED POPULATION PROGRAMS BY SUCCESSFULNESS OF STATE

Level of Training and Experience	Disadvantaged Personnel		
	All Staff (percent)	Success States (percent)	Remaining States (percent)
Training and Experience	42	50	38
Training Only	2	0	3
Experience Only	44	39	47
No Training or Experience	12	11	12
TOTAL	100	100	100
Number	[52]	[18]	[34]

TABLE 14

LEVEL OF EFFORT BY SUCCESSFUL STATES IN HANDICAPPED PROGRAMS (SECTION 110 Funds)

Level of Effort	Enrollment Level[a]		State/Local Commitment of Funds[b]		Per Capita Expenditures[c] (Total Vocational Enrollment)		Per Capita Expenditures[d] (Occupationally Specific)	
	All States (percent)	Success States (percent)	All States (percent)	Success States (percent)	All States (percent)	Success States (percent)	All States (percent)	Success States (percent)
High	26	60	28	40	32	40	36	20
Medium	38	20	40	60	36	40	34	40
Low	36	20	32	0	32	20	30	40
TOTAL	100	100	100	100	100	100	100	100
Number	[50]	[5]	[50]	[5]	[50]	[5]	[50]	[5]

[a]Percentage of students in grades 7-12 enrolled in vocational education for school year 1979-80 (Low=10.6-35.9; Medium=36.0-50.9; High=51.0-100.5). Source: Digest of Education Statistics 1981 and VEDS 79-80 Preliminary Table 1104.

[b]State and local funds as a percent of total vocational education funds (Low=61.1-86.0; Medium=86.1-89.9; High=90.0-93.7). Source: VEDS 79-80 Preliminary Table 7.5.

[c]Per capita expenditures per secondary vocational student (Low=$310-549; Medium=$550-799; High=$800-1,850). Source: VEDS 79-80 Preliminary Tables 7.5 and 1104.

[d]Per capita expenditures per occupationally specific secondary vocational student (Low=$450-1,699; Medium=$1,700-2,609; High=$2,610-9,720). Source: VEDS 79-80 Preliminary Tables 7.5 and 1204.

TABLE 15

WORK EXPERIENCE BY SUCCESSFULNESS OF
STATES IN PROGRAMS FOR THE HANDICAPPED

Level of Experience	Handicapped Activities		
	All Staff (percent)	Success States (percent)	Remaining States (percent)
Experience Only	32	37	31
No Experience	68	63	69
TOTAL	100	100	100
Number	[1808]	[246]	[1562]

able to support vocational education at the highest levels. One of the reasons states decide to stress economic development is to improve their economic conditions. There is, therefore, a tendency for states that traditionally rank low on educational expenditures to emphasize economic development.

Staffs in successful states in economic development reported a higher frequency of training as a preparation for work (table 17) than did staffs in the remaining states, while at the same time they reported a lower level of training and experience in economic development.

Limited English Speaking

Those states successful in programs for limited English speaking populations exerted more effort in vocational education than did all the states (table 18), except when measured by state and local commitment of funds as a percent of total secondary vocational funds.

Staffs within the successful states were slightly more likely to have both training and experience or to have experience only (table 19), and 38 percent of the staff in the remaining states had neither training nor experience compared to 31 percent of staffs in successful states.

TABLE 16

LEVEL OF EFFORT BY SUCCESSFUL STATES IN ECONOMIC DEVELOPMENT

Levels of Effort	Enrollment Level[a]		State/Local Commitment of Funds[b]		Per Capita Expenditures[c] (Total Vocational Enrollment)		Per Capita Expenditures[d] (Occupationally Specific)	
	All States (percent)	Success States (percent)	All States (percent)	Success States (percent)	All States (percent)	Leading States (percent)	All States (percent)	Success States (percent)
High	26	22	28	22	32	33	36	33
Medium	38	45	40	67	36	22	34	45
Low	36	33	32	11	32	45	30	22
Total	100	100	100	100	100	100	100	100
Number	[50]	[9]	[50]	[9]	[50]	[9]	[50]	[9]

[a]Percentage of students in grades 7-12 enrolled in vocational education for school year 1979-80 (Low=10.6-35.9; Medium=36.0-50.9; High=51.0-100.5). Source: Digest of Education Statistics 1981 and VEDS 79-80 Preliminary Table 1104.

[b]State and local funds as a percent of total vocational education funds (Low=61.1-86.0; Medium=86.1-89.9; High=90.0-93.7). Source: VEDS 79-80 Preliminary Table 7.5.

[c]Per capita expenditures per secondary vocational student (Low=$310-549; Medium=$550-779; High=$800-1,850). Source: VEDS 79-80 Preliminary Tables 7.5 and 1104.

[d]Per capita expenditures per occupationally specific secondary vocational student (Low=$450-1,699; Medium=$1,700-2,609; High=$2,610-9,720). Source: VEDS 79-80 Preliminary Tables 7.5 and 1204.

TABLE 17

LEVEL OF TRAINING AND EXPERIENCE IN ECONOMIC DEVELOPMENT BY SUCCESSFULNESS OF STATES IN ECONOMIC DEVELOPMENT

Level of Training and Experience	Economic Development Activity		
	All Staff (percent)	Success States (percent)	Remaining States (percent)
Training and Experience	29	23	30
Training Only	29	37	28
Experience Only	8	8	7
No Training or Experience	34	32	35
TOTAL	100	100	100
Number	[1798]	[316]	[1482]

TABLE 18

LEVEL OF EFFORT BY SUCCESSFUL STATES IN LIMITED ENGLISH SPEAKING PROGRAMS (SECTION 110 Funds)

Level of Effort	Enrollment Level[a]		State/Local Commitment of Funds[b]		Per Capita Expenditures[c] (Total Vocational Enrollment)		Per Capita Expenditures[d] (Occupationally Specific)	
	All States (percent)	Success States (percent)	All States (percent)	Success States (percent)	All States (percent)	Success States (percent)	All States (percent)	Success States (percent)
High	26	33	28	42	32	50	34	42
Medium	38	50	40	33	36	25	34	25
Low	36	17	32	25	32	25	32	33
TOTAL	100	100	100	100	100	100	100	100
Number	[50]	[12]	[50]	[12]	[50]	[12]	[50]	[12]

[a]Percentage of students in grades 7-12 enrolled in vocational education for school year 1979-80 (Low=10.6-35.9; Medium=36.0-50.9; High=51.0-100.5). Source: Digest of Education Statistics 1981 and VEDS 79-80 Preliminary Table 1104.

[b]State and local funds as a percent of total vocational education funds (Low=61.1-86.0; Medium=86.1-89.9; High=90.0-93.7). Source: VEDS 79-80 Preliminary Table 7.5.

[c]Per capita expenditures per secondary vocational student (Low=$310-549; Medium=$550-799; High=$800-1,850). Source: VEDS 79-80 Preliminary Tables 7.5 and 1104.

[d]Per capita expenditures per occupationally-specific secondary vocational students (Low=$450-1,699; Medium=$1,700-2,609; High=$2,610-9,720). Source: VEDS 79-80 Preliminary Tables 7.5 and 1204.

[e]Successful states are those states in which the state provides 65 percent or more of all funds under Section 110 for the limited English speaking. Successful states are California, Illinois, Indiana, Iowa, Maine, Nevada, New Hampshire, New York, Pennsylvania, Rhode Island, Wisconsin, and Washington.

TABLE 19

LEVEL OF TRAINING AND EXPERIENCE IN LIMITED ENGLISH SPEAKING POPULATIONS BY SUCCESSFULNESS OF STATES IN LIMITED ENGLISH SPEAKING PROGRAMS

Level of Training and Experience	Limited English Speaking Commitment		
	All Staff (percent)	Success States (percent)	Remaining States (percent)
Training and Experience	11	14	10
Training Only	42	41	43
Experience Only	11	14	9
No Training or Experience	36	31	38
TOTAL	100	100	100
Number	[1795]	[518]	[1277]

IMPLICATIONS

What does this reanalysis indicate concerning the capacity of state staff to provide leadership for the implementation of federal priorities? To the extent that capacity was measured by self-reported training and experience, almost all state staff who had responsibilities in the priority areas that were examined appear to be qualified. There were slight differences across the various priority areas in terms of employment, demographic characteristics, and funding. The identification of certain trends or patterns in staffing could possibly be used to describe not only what is (the current situation), but also what needs to be, for certain federal initiatives to be implemented at the local level.

Sex Equity

The analysis of state efforts and success in the priority areas suggests that those states that were successful in sex equity tended to be high effort states on all the indicators. These states also tended to have more sex equity staff who were qualified by virtue of both training and experience.

A high percentage of sex equity personnel in all states are new hires; state agencies sought external training and experience to supplement existing staff capacity. States will respond to federal initiatives if given a clear mandate to do so. The provision in P.L. 94-482, which allocated funding for the sex equity staff, may have influenced the hiring of new staff as opposed to the reassignment of currently employed staff. While the change in staffing is evident from this data, how often does the federal government want to be this prescriptive? Should the federal government mandate changes in the composition of state staffs, or is that an activity more appropriately reserved for the states? The current trend in the role of the federal government is away from prescriptive directives and toward greater latitude for state and local governments. It is unlikely that legislating funds for changing the capabilities of state staffs will be a popular strategy in the near future.

Disadvantaged

The grades seven through twelve enrollment in states with successful programs for the disadvantaged was high, as was the funding per student enrolled in occupationally specific programs. High proportions of the priority area staffs were from large cities where disadvantaged populations are concentrated. The staffs' backgrounds seem to be congruent with the population being served. Such a matching technique may be beneficial to the success of a program since staff might have a better base to

understand the dimensions of the problems of the disadvantaged student. The data presented here, however, do not address whether matching staff characteristics to the populations served enhances the quality of vocational education programs.

Handicapped

In successful states in programs for the handicapped, a high percentage of funding was from state and local sources. For individuals with training and experience, a higher percentage of staff members had doctorates than did the state staff as a whole. A number of staff with training and experience related to the handicapped population were hired prior to the 1976 Vocational Education Amendments. Such a pattern indicates that factors besides this legislation were present in the determination of staffing requirements with regard to handicapped populations.

Economic Development

In the states which have been successful in economic development activities, the per capita funding for secondary total and occupationally specific vocational education was low. There is a certain face validity in this finding, in that those states with lower levels of economic activity would seem most likely to try to encourage more activity. The role vocational education plays in economic development should also be considered. In most states vocational education is a resource and performs a support role. Economic development activities are initiated in other state agencies, primarily the Office of the Governor or the Department of Economic and Community Development. Training and experience in economic development appears to exist at all levels of employment within the state agencies.

Limited English Speaking

A higher percentage of individuals with training and experience in this priority area have doctoral degrees than does the staff as a whole. Successful states had a high vocational education per capita expenditure when measured by secondary vocational education enrollment. There were seven states that had no state or federal funding for limited English speaking populations. Such a pattern may reflect that a small percentage of the state's population needs such a program.

Given the inherent lack of precision in these data, these conclusions must be tentative. Most of the differences in staff training and experiences that were found were in the expected directions; however, most of these differences were not large. The overall patterns suggest that the states have the capacity to provide leadership for the implementation of programs to realize federal priorities. When there is a clear mandate from the

federal government--such as the requirement to hire full-time personnel to reduce sex stereotyping (P.L. 94-482 Sec. 104 (b))--states will hire new staff if they are needed. State staff also are diverse with regard to sex, racial/ethnic, and urban-rural backgrounds. The results presented do not reflect the stereotype of white males from agricultural backgrounds that is often attributed to vocational education administrators.

Obviously, many other factors besides the training and experience of state staff influence whether or not federal priorities are carried out at the state and local level. The data analyzed for this paper suggest that when special knowledge or skills are needed states do seek them and that the individuals who are responsible for providing state leadership are qualified by virtue of their training and experience to do so.

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